Docket No. No 1289 US

NIS.041

AMENDMENTS TO THE CLAIMS:

1. (Currently amended) A load dispersion-type duplex communication system,

comprising:

a plurality of duplexed transmission devices;

wherein, whether each of said transmission devices is in an overload state or in an

allowable load state is judged and said transmission device judged as responsive to being in

said an allowable load state performs to perform a duplex operation with another transmission

device and said transmission device being judged as is further responsive to being in said an

overload state performs to perform a single and work-dividing operation with said-the other

transmission device.

2. (Currently amended) The load dispersion-type duplex communication system

according to Claim 1, wherein each of said transmission devices judges, for itself, whether

each of said that transmission devices device is in said overload the allowable load state or in

said allowable load the overload state and, does in response to the judging, automatically

switching switches between said the duplex operation and said the single and work-dividing

operation.

3. (Currently amended) The load dispersion-type duplex communication system

according to Claim 1, wherein, whether said each of said transmission devices is in said the

overload state or in said the allowable load state is judged based on a data storage capacity of

said each of said that transmission-devices device.

Serial No.: 09/929,106 Docket No. No 1289 US

NIS.041

- 4. (Currently amended) The load dispersion-type duplex communication system according to Claim 1, wherein a control is made in a manner to set an overload threshold value used to judge judging whether said each of said transmission devices is in said the overload state is based on an overload threshold value, or not and judging whether each of said transmission devices is in the allowable load state is based on an allowable load threshold value, used to judge whether said allowable load is below said lower than the overload threshold value. or not.
- 5. (Currently amended) The load dispersion-type duplex communication system according to Claim 1, wherein, whether said-each of said transmission devices is in said-the overload state or in said-the allowable load state is judged based on an amount of changes change in data storage capacity within stored in that communication device over a predetermined period of time. in each of said transmission devices.
- 6. (Currently amended) <u>A The load dispersion-type duplex communication system</u>, according to Claim 1, comprising:

first and second duplexed transmission devices, each of said transmission devices

being responsive to being in an allowable load state to perform a duplex operation with

another transmission device and being further responsive to being in an overload state to

perform a single and work-dividing operation with the other transmission device,

wherein either of when said transmission devices are performing duplex operation,

Serial No.: 09/929,106 Docket No. No 1289 US

NIS.041

data processed by two-said transmission devices performing said duplex operation is selected and processed by a low-order lower-order transmission device on a transmission path, and

wherein if judged to be in said overload state, when said transmission devices are performing single and work-dividing operation, data processed by two-said transmission devices performing said single and work-dividing operation is multiplexed and processed by a low-order-lower-order transmission device on said transmission path.

7. (Currently amended) The load dispersion-type duplex communication system according to Claim 6, wherein:

said each of said transmission devices is provided with comprises a unit used to judge section for judging whether said each of said that transmission devices device is in said the overload state or in said the allowable load state, and

said each of said transmission devices, in accordance with a judgment by said each of said that transmission devices device, automatically does switching switches between said the duplex operation and said the single and work-dividing operation and then provides an instruction for said such switching to another transmission device of a same order on a transmission path and to another transmission device of a low-order transmission device lower order on said the transmission path.

8. (Currently amended) The load dispersion-type duplex communication system according to Claim 6, wherein, whether said-each of said transmission devices is in said-the overload state or in said-the allowable load state is judged based on a data storage capacity of

Docket No. No 1289 US

NIS.041

said each of said that transmission devices device.

(Currently amended) The load dispersion-type duplex communication system 9. according to Claim 6, wherein a control is made in a manner to set an overload threshold value used to judge judging whether said each of said transmission devices is in said the overload state or not is based on an overload threshold value, and judging whether each of said transmission devices is in the allowable load state is based on an allowable load threshold value, used to judge whether said allowable load is below said lower than the overload threshold value. or not.

- 10. (Currently amended) The load dispersion-type duplex communication system according to Claim 6, wherein, whether said each of said transmission devices is in said the overload state or in said-the allowable load state is judged based on an amount of changes change in data storage capacity within stored in that communication device over a predetermined period of time. in each of said transmission devices.
- 11. (Currently amended) A load dispersion-type duplex communication system-device, comprising:
 - a received data selecting and multiplexing section;
- a memory section-used to store, on a temporary basis, for storing data fed from said received data selecting and multiplexing section;
 - a transmission path interfacing section for transmitting data from said memory section

Docket No. No 1289 US

NIS.041

to a further device;

a load detecting section used to compare for comparing the amount of data amounts

accumulated stored in said memory section with a threshold value amount; and

a controller used to control each of responsive to the results of the comparison by said

load detecting section, for controlling said received data selecting and multiplexing section,

said memory section, said transmission path interface section, and said load detecting section

in accordance with results of the comparison by said load detecting section and to do

switching so as to switch operation of said communication device between a duplex operation

and single and work-dividing operation.

12. (New) The load dispersion-type duplex communication system according to claim

11, wherein said controller controls said received data selecting and multiplexing section, said

memory section, said transmission path interface section, and said load detecting section so as

to switch operation of the communication device to the duplex operation when said load

detecting section detects that said memory section is in an overload state, and controls said

received data selecting and multiplexing section, said memory section, said transmission path

interface section, and said load detecting section so as to switch operation of the

communication device to the single and work-dividing operation when said load detecting

section detects that said memory section is in an allowable load state.

13. (New) The load dispersion-type duplex communication system according to Claim

12, wherein, whether said memory section is in the overload state or in the allowable load

Docket No. No 1289 US

NIS.041

state is judged based on a data storage capacity of said memory section.

14. (New) The load dispersion-type duplex communication system according to Claim

12, wherein judging whether said memory section is in the overload state is based on an

overload threshold value, and judging whether said memory section is in the allowable load

state is based on an allowable load threshold value, lower than the overload threshold value.

15. (New) The load dispersion-type duplex communication system according to Claim

12, wherein, whether said memory section is in the overload state or in the allowable load

state is judged based on an amount of change in data stored in said memory section over a

predetermined period of time.

16. (New) A load dispersion-type duplex communication system comprising a plurality

of duplexed transmission devices, each duplexed transmission device comprising a receiving

section for receiving data, a memory section for storing received data, an output section for

outputting data from said memory section, a load detecting section for judging the amount of

data stored in said memory section, and a control section responsive to said load detecting

section judging that the amount of data stored in said memory section is causing that

duplexed transmission device to be in an allowable load state, to cause said transmission

device to operate in a duplex operation with another transmission device, and further

responsive to said load detecting section judging that the amount of data stored in said

memory section is causing that duplexed transmission device to be in an overload state, to

Docket No. No 1289 US

NIS.041

cause said transmission device to operate in a single and work-dividing operation with the

other transmission device.

17. (New) The load dispersion-type duplex communication system according to Claim

16, wherein each of said load detecting sections judges whether its transmission device is in

the overload state or in the allowable load state based on a data storage capacity of that

transmission device.

18. (New) The load dispersion-type duplex communication system according to Claim

16, wherein each of said load detecting sections judges whether its transmission device is in

the overload state based on an overload threshold value, and judges whether its transmission

device is in the allowable load state based on an allowable load threshold value, lower than

the overload threshold value.

19. (New) The load dispersion-type duplex communication system according to Claim

16, wherein, each of said load detecting sections judges whether its transmission device is in

the overload state or in the allowable load state based on an amount of change in data stored

in its communication device over a predetermined period of time.

20. (New) A load dispersion-type duplex communication system, comprising:

a plurality of means for conducting duplexed transmission;

wherein, each of said means is responsive to being in an allowable load state to

Docket No. No 1289 US

NIS.041

perform a duplex operation with another one of said means and is further responsive to being

in an overload state to perform a single and work-dividing operation with the other one of

said means.

21. (New) A communication method for use by a duplexed transmission device which is

in a load dispersion-type duplex communication system including a plurality of duplexed

transmission devices, said method comprising:

when the duplexed transmission device is in an allowable load state, performing a

duplex operation with another duplexed transmission device; and

when the duplexed transmission device is in an overload state, performing a single

and work-dividing operation with the other transmission device.